**KEY TAKEAWAYS:**

- Continued vaccine distribution in the U.S. will allow for a substantial reopening of face-to-face sectors and the economy more broadly.
- Vanguard expects headline CPI to hover around 3% for the rest of 2021 before dropping back toward 2% for most of 2022.
- We don’t foresee the Fed raising its interest rate target until the third quarter of 2023.
- Vanguard believes the factors keeping some workers sidelined to dissipate over the next several months.

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**Asset-class return outlooks**

Our 10-year, annualized, nominal return projections, as of March 31, 2021, are shown below. Please note that the figures are based on a 1.0-point range around the rounded 50th percentile of the distribution of return outcomes for equities and a 0.5-point range around the rounded 50th percentile for fixed income.

<table>
<thead>
<tr>
<th>Equities</th>
<th>Return projection</th>
<th>Median volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. equities</td>
<td>2.6%–4.6%</td>
<td>16.7%</td>
</tr>
<tr>
<td>U.S. value</td>
<td>3.4%–5.4%</td>
<td>18.8%</td>
</tr>
<tr>
<td>U.S. growth</td>
<td>-0.5%–1.5%</td>
<td>17.7%</td>
</tr>
<tr>
<td>U.S. large-cap</td>
<td>2.4%–4.4%</td>
<td>16.4%</td>
</tr>
<tr>
<td>U.S. small-cap</td>
<td>2.4%–4.4%</td>
<td>21.7%</td>
</tr>
<tr>
<td>U.S. real estate investment trusts</td>
<td>2.4%–4.4%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Global equities ex-U.S. (unhedged)</td>
<td>5.5%–7.5%</td>
<td>18.9%</td>
</tr>
<tr>
<td>U.S. inflation</td>
<td>1.4%–2.4%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fixed income</th>
<th>Return projection</th>
<th>Median volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. aggregate bonds</td>
<td>1.4%–2.4%</td>
<td>4.5%</td>
</tr>
<tr>
<td>U.S. Treasury bonds</td>
<td>1.1%–2.1%</td>
<td>4.7%</td>
</tr>
<tr>
<td>U.S. credit bonds</td>
<td>1.8%–2.8%</td>
<td>5.7%</td>
</tr>
<tr>
<td>U.S. high-yield corporate bonds</td>
<td>2.2%–3.2%</td>
<td>10.2%</td>
</tr>
<tr>
<td>U.S. Treasury Inflation-Protected Securities</td>
<td>0.8%–1.8%</td>
<td>7.0%</td>
</tr>
<tr>
<td>U.S. cash</td>
<td>1.3%–2.3%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Global bonds ex-U.S. (hedged)</td>
<td>1.3%–2.3%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Emerging markets sovereign</td>
<td>2.1%–3.1%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

These probabilistic return assumptions depend on current market conditions and, as such, may change over time.

**IMPORTANT:** The projections or other information generated by the Vanguard Capital Markets Model® regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as of December 31, 2020. Results from the model may vary with each use and over time. For more information, see page 4.

Source: Vanguard Investment Strategy Group.
**Expect growth to be robust in the U.S. as the economy reopens**

**United States.** High-frequency indicators in the United States point to strong demand for goods and services thus far in the second quarter, in line with our expectations for quarterly growth that could approach double digits, likely the strongest growth figures of the year.

- Vaccine distribution remains on a trajectory to cover about 65% of the U.S. population by the end of the second quarter.
- Progress on vaccines will allow for a substantial reopening of face-to-face sectors and the economy more broadly.

**Euro area.** The euro area experienced a double-dip recession in the first quarter after a 0.7% contraction in the fourth quarter of 2020. But more timely data alongside generally stronger sentiment paint a more optimistic picture of an economy that is likely growing again.

- Vanguard expects growth around 4% for all of 2021, as several countries have announced steps for easing COVID-19 restrictions.
- We expect GDP in the Euro area to reach its pre-pandemic level in the first half of 2022.

**China.** GDP in China grew by 18.3% in the first quarter compared with the first quarter of 2020, having grown 6.5% year-on-year in the fourth quarter.

- The eye-popping number is attributable to a great extent to base effects, or comparison to weak numbers in the year-earlier period, when COVID-19 took hold.
- Recent economic data suggest an uneven recovery continues, with exports and investments driving the economy while consumption continues to lag.
- Consensus views are coming around toward Vanguard’s forecast for GDP growth around 9.0% for the full year, equivalent to a 5.5% compound annualized growth rate compared with 2019, before the pandemic.

**Emerging markets.** Asia, the recent engine for growth in emerging markets, is now the focal point for virus transmission.

- Vanguard believes its forecast for 2021 growth of more than 8.0% in Asia can hold provided virus interruptions are reasonably short-lived.
- We continue to foresee 2021 growth around 4.0% in Latin America, which wouldn’t make up for a contraction of 7.4% in 2020.

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**Inflation picks up but is expected to peak in the second quarter**

The Consumer Price Index (CPI) in the United States rose a greater-than-expected 0.8% in April on a seasonally adjusted basis compared with March.

- Headline inflation was up 4.2% compared with a year earlier, also greater than expected. Core CPI, which excludes volatile food and energy prices, rose 0.9% compared with a month earlier and 3.0% compared with April 2020.
- Vanguard expects inflation to moderate after peaking in the second quarter.
- We expect headline CPI to hover around 3% for the rest of 2021 before dropping back toward 2% for most of 2022.
- We expect core CPI to fall back below 2% in the second half of 2021 before rising marginally above 2% toward the second half of 2022 and into 2023.
- One caveat: inflation, once it takes hold in consumers’ minds, has a particular habit of engendering more inflation.
No Fed rate hikes expected soon

- At the end of the decade, we foresee rate targets of 2.5% for the U.S. Federal Reserve and the Bank of England, and a target of 1.5% for the European Central Bank—levels that would reflect neither accommodative nor restrictive monetary policy.
- The U.S. Federal Open Market Committee voted on April 28 to leave the target range for its federal funds rate unchanged at 0%–0.25% and its bond-buying program unchanged.
- Vanguard doesn’t foresee the Fed raising its interest rate target until the third quarter of 2023.

Expect variability as the labor market begins to ramp up

The unemployment rate in the United States rose to 6.1% in April as only 266,000 non-farm jobs were created, far below expectations for more than a million.
- The data reflect the labor supply and demand dynamics of a recovering economy.
- We expect a high degree of variability in jobs numbers in the coming months as a labor market that turned off all at once wrestles with how to turn itself back on. We do expect factors keeping some workers sidelined to dissipate over the next several months.
All investing is subject to risk, including possible loss of principal.

Diversification does not ensure a profit or protect against a loss.

Investments in bonds are subject to interest rate, credit, and inflation risk.

Investments in stocks or bonds issued by non-U.S. companies are subject to risks including country/regional risk and currency risk. These risks are especially high in emerging markets.

**IMPORTANT:** The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model is a proprietary financial simulation tool developed and maintained by Vanguard’s primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.